

101731,535

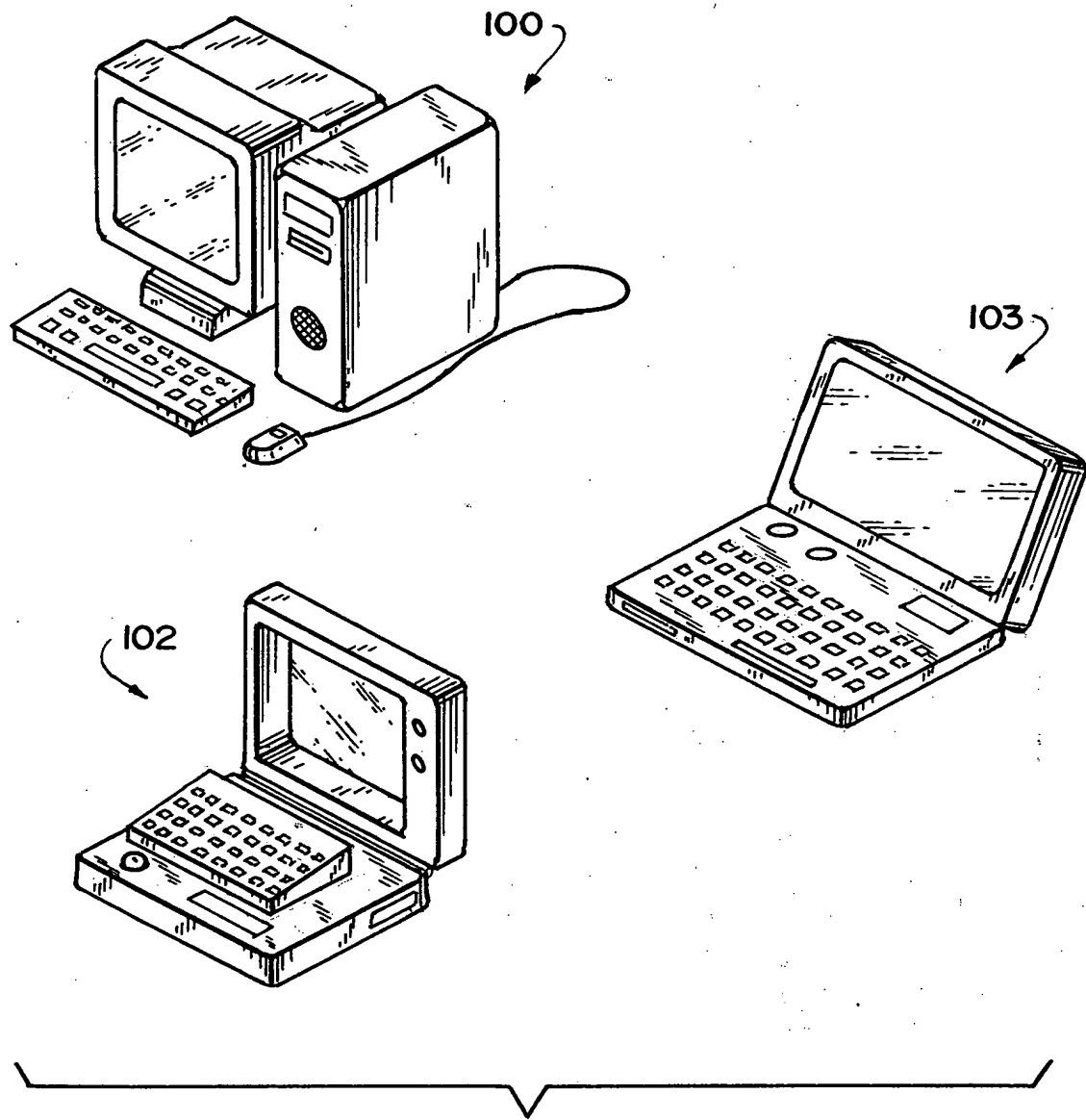
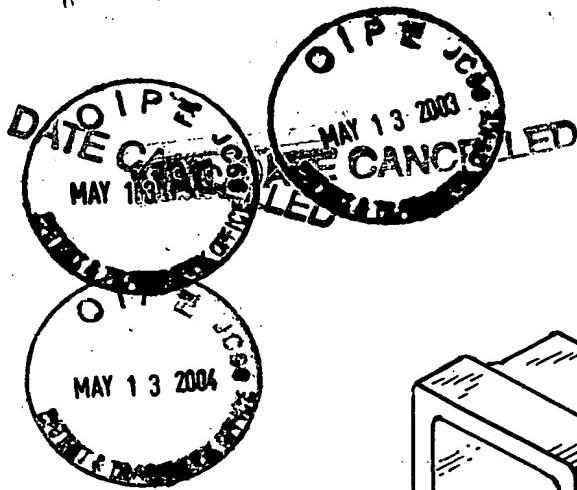


FIG.I

10/731,535



201

STUDENT (SID, SNAME, MAJOR)
CLASS (CID, CNAME, TIME, ROOM)

STUDENT_CLASS (SID, CID)

OLD WAY- USE STUDENT_CLASS TO MODEL RELATIONSHIP

202

STUDENT (SID, SNAME, MAJOR, CIDBS)
CLASS (CID, CNAME, TIME, ROOM, SIDBS)

NEW WAY- USE BITSETS CIDBS AND SIDBS TO MODEL
RELATIONSHIP

FIG.2

401

OLD WAY

CATEGORY (CATEGORYID BIGINT)
DOCUMENT (DOCUMENTID BIGINT)
PARENT_CHILD ASSOCIATIONS (CHIL DID BIGINT, PARENTID
BIGINT)

402

NEW WAY

CATEGORY (CATEGORYID BIGINT, BS DOCUMENT BITSET,
BSPARENT BITSET, BS CHILD BITSET)
DOCUMENT (DOCUMENTID BIGINT)

FIG.4

BRAND:

IBM INTELLI
STATION

1,2,3,4,5,6,7,8,9
10,11,12,13

FAMILY:

INTELLISTATION
EPRO

11,12
INTELLI
STATION MPRO

1,2,3,4,5,6,7,
10,11,12,13

MACHINE
TYPE:

6868
8

6889
6,7

6897
9,10

MODEL
NUMBER:

1,2
15K

3,6,7,11,
12,13

4,5
15V

3,6,7,11,
12,13

PRODUCT
INSTANCES:

3,6,7,11,
12,13

23H3471
6889-15U

3,6,7,11,
12,13

23H3470
6889-15U

FIG.3

SES '18 L101

FIG.5

NOR RULES: INPUT ALL FALSE \Rightarrow OUTPUT TRUE

INPUT TRUE EXPRESSIONS	ANDISEMPTY EVALUATES TO FALSE	RETURNS FALSE NOR RULES
INPUT FALSE EXPRESSIONS + OPTIONAL	ANDEQUALS EVALUATES TO TRUE	RETURNS TRUE NOR RULES

OR RULES: INPUT ALL FALSE \Rightarrow OUTPUT FALSE

INPUT TRUE EXPRESSIONS	ANDISEMPTY EVALUATES TO FALSE	RETURNS TRUE OR RULES
INPUT FALSE EXPRESSIONS + OPTIONAL	ANDEQUALS EVALUATES TO TRUE	RETURNS FALSE OR RULES

NAND RULES: INPUT ALL TRUE \Rightarrow OUTPUT FALSE

INPUT TRUE EXPRESSIONS + OPTIONAL	ANDEQUALS EVALUATES TO TRUE	RETURNS FALSE NAND RULES
INPUT FALSE RULES	ANDISEMPTY EVALUATES TO FALSE	RETURNS TRUE NAND RULES

AND RULES: INPUT ALL TRUE \Rightarrow OUTPUT TRUE

INPUT TRUE EXPRESSIONS + OPTIONAL	ANDEQUALS EVALUATES TO TRUE	RETURNS TRUE AND RULES
INPUT FALSE EXPRESSIONS	ANDISEMPTY EVALUATES TO FALSE	RETURNS FALSE AND RULES